
**SECTION 02005
FILTER FABRIC SILT FENCE**

PART I: GENERAL

1.1 GENERAL REQUIREMENTS

- A. Requirements for the installation, maintenance and removal of erosion and sedimentation control filter fabric silt fence utilized during construction and prior to the final development of the site.

1.2 MEASUREMENT AND PAYMENT

A. Unit Prices:

1. Payment for filter fabric silt fence shall be on a unit price basis. Unit price includes cost of filter fabric fence, staking poles, ditching, and reinforcing. Maintenance during construction and removal of fence are incidental to installation and there shall be no separate pay for these items.
2. Refer to Section 01270 – Measurement and Payment for unit price procedures.

B. Stipulated Price (Lump Sum):

1. If Contract is Stipulated Price Contract, payment for work in this Section shall be included in Total Stipulated Price.

1.3 REFERENCES

A. ASTM – American Society for Testing and Materials.

1. ASTM D4491 – Standard Test Methods for Water Permeability of Geotextiles by Permittivity.

B. CFTS – City of Friendswood Technical Specifications.

PART II: PRODUCTS

2.1 MATERIALS

A. Material shall be Non-woven Geotextile Filter Fabric:

1. Composed of either:
 - a. Polypropylene material;
 - b. Polyethylene material;
 - c. Ethylene material;
 - d. or Polyamide material.
2. Grab strength shall be at least one hundred pounds (100 Lbs) in any principal direction.
3. Mullen burst strength shall exceed two hundred pounds per square inch (200 psi).
4. Equivalent opening size shall be between fifty gallons per minute per square foot (50 gpm/Sf) and one hundred forty gallons per minute per square foot (140 gpm/Sf).

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5. Water flow rate shall be ten gallons per minute per square foot (10 gpm/Sf) at fifty millimeters (50 mm) constant head as determined by multiplying permittivity (in sec^{-1}) as determined by ASTM D4491 by a conversion factor of seventy-four (74).
 6. Ultraviolet ray inhibitors and stabilizers shall provide a maximum of six months (6 Mos) of expected usable life at a temperature range of zero degrees Fahrenheit (0° F) to one hundred twenty degrees Fahrenheit (120° F).
 7. Ultraviolet radiation stability shall be ninety percent (90%).
 8. Fabric reinforced with support netting shall be reinforced with an industrial polypropylene netting with three-quarter inch ($3/4$ In) spacing and shall also include a heavy duty nylon top support cord.
- B. Fence Supports
1. Two inch by two inch (2 In x 2 In) wooden posts three feet (3 Ft) long or equivalent, and field constructed or;
 2. Factory pre-assembled with support netting and heavy duty nylon top support cord.

PART III: EXECUTION

3.1 GENERAL

- A. Except as otherwise directed or otherwise shown on the Drawings, provide non-woven geotextile filter fabric silt fences to prevent erosion and control sedimentation.
- B. Maintain silt fences until the project is accepted by the City.
- C. At the City's option, silt fences may remain in place after acceptance.
- D. Maintenance and removal of silt fences shall comply with all requirements as specified in Section 02000 – Erosion Control Systems.

3.2 CONSTRUCTION METHODS

- A. Silt fences shall not exceed twenty-four inches (24 In) in height.
- B. Wood posts shall be driven at least twelve inches (12 In) into the ground.
- C. Maximum spacing of wood posts shall be three feet (3 Ft) for field constructed fences and eight feet (8 Ft) for factory pre-assembled silt fences.
- D. Filter fabric shall be stapled using at least one-half inch ($1/2$ In) staples to the upslope side of the posts.
- E. Anchor the filter fabric by spreading at least eight inches (8 In) of the fabric in a four inch by four inch (4 In x 4 In) trench or a four inch (4 In) deep V-trench on the upslope side of the fence.

END OF SECTION